

**DIPLYCOSIA INDICA (ERICACEAE):
A NEW SPECIES AND A NEW GENERIC RECORD FOR INDIA**

M.R. Debta¹ and H.J. Chowdhery

*Botanical Survey of India (Northern Circle)
192, Kaulagarh Road, Dehradun- 248 195, INDIA*

ABSTRACT

Diplycosia Blume (Ericaceae)—a new generic record and ***Diplycosia indica*** M.R. Debta & H.J. Chowdhery—a new species from India is described and illustrated.

KEY WORDS: *Diplycosia*, India, new species, new generic record

RESUMEN

Diplycosia Blume (Ericaceae)—nueva cita genérica, y se describe e ilustra ***Diplycosia indica*** M.R. Debta & H.J. Chowdhery—una nueva especie de la India.

INTRODUCTION

The genus *Diplycosia* consisting of about 99 species (Mabberley 1997), is widely distributed in the Malaysian region. Sleumer (1967) revised the genus for *Flora Malesiana* treating 97 species. He reported that the genus has its highest diversity in Borneo, while Mt. Kinabalu has the highest concentration of species. Powell and Kron (2001), based on molecular studies, have suggested treating *Diplycosia* under *Gaultheria* L. Argent (2002)—while studying *Diplycosia* from Borneo and peninsular Malaysia—described seven new species, one new form, and made two new combinations. *Diplycosia* can be distinguished from *Gaultheria* with the following key.

KEY TO THE GENERA *DIPLYCOSIA* AND *GAULTHERIA*

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|---|--------------------------|
| 1. Flowers in fascicles; anther cells unawned, not aristate, with short or long apical tubules at apex; tubules connate or free _____ | <i>Diplycosia</i> |
| 1. Flowers in racemes; anther cells awned or aristate, not having apical tubules at apex _____ | <i>Gaultheria</i> |

During a 2006 plant collecting expedition to Singalila National Park (West Bengal), in the eastern Himalayan phytogeographic zone, some interesting and unusual plant specimens belonging to the family Ericaceae were collected. Initially they were identified as species of *Gaultheria*, but detailed studies revealed that some of the specimens belonged to the closely allied genus *Diplycosia*, which is hitherto unknown from India. Further critical examinations of the specimens have shown that though one specimen had some resemblance to a Malaysian species, *Diplycosia aperta* J.J. Sm., but differs widely from it in habit, leaf venations, number of flowers, bracteoles, and calyx character. The new collection is therefore described as a new species, *Diplycosia indica*, which is also a new generic record for India. Table 1 shows the differences with its allied species *Diplycosia aperta*. An illustration of the new species is provided for easy identification.

Diplycosia indica M.R. Debta & H.J. Chowdhery, sp. nov. (**Fig. 1**). TYPUS: INDIA. WEST BENGAL: Darjeeling district, Singalila National Park, from Kainyakata to Kalapokhri, ca. 2950 m, 02 Jun 2006, M.R. Debta 40813 (HOLOTYPUS: CAL; ISOTYPUS: BSD).

Species nova *Diplycosia aperta* J.J. Sm. arte affinis, sed habitu terrestri; inflorescentiis 4–6-floratis; floribus multum brevioribus, albis; pedicellis glabris; calycibus puberulis et bracteolis acutis ad acuminatis, sparse puberulis differt.

Terrestrial, prostrate shrubs, up to 1.5 m high. Stems terete, laxly to densely brown-hirsute or setose, reddish. Leaves subcoriaceous, 13–36 mm long × 7–18 mm wide, elliptic to ovate-elliptic, mucronate or apiculate,

¹Corresponding author's e-mail: manas_debta@rediffmail.com

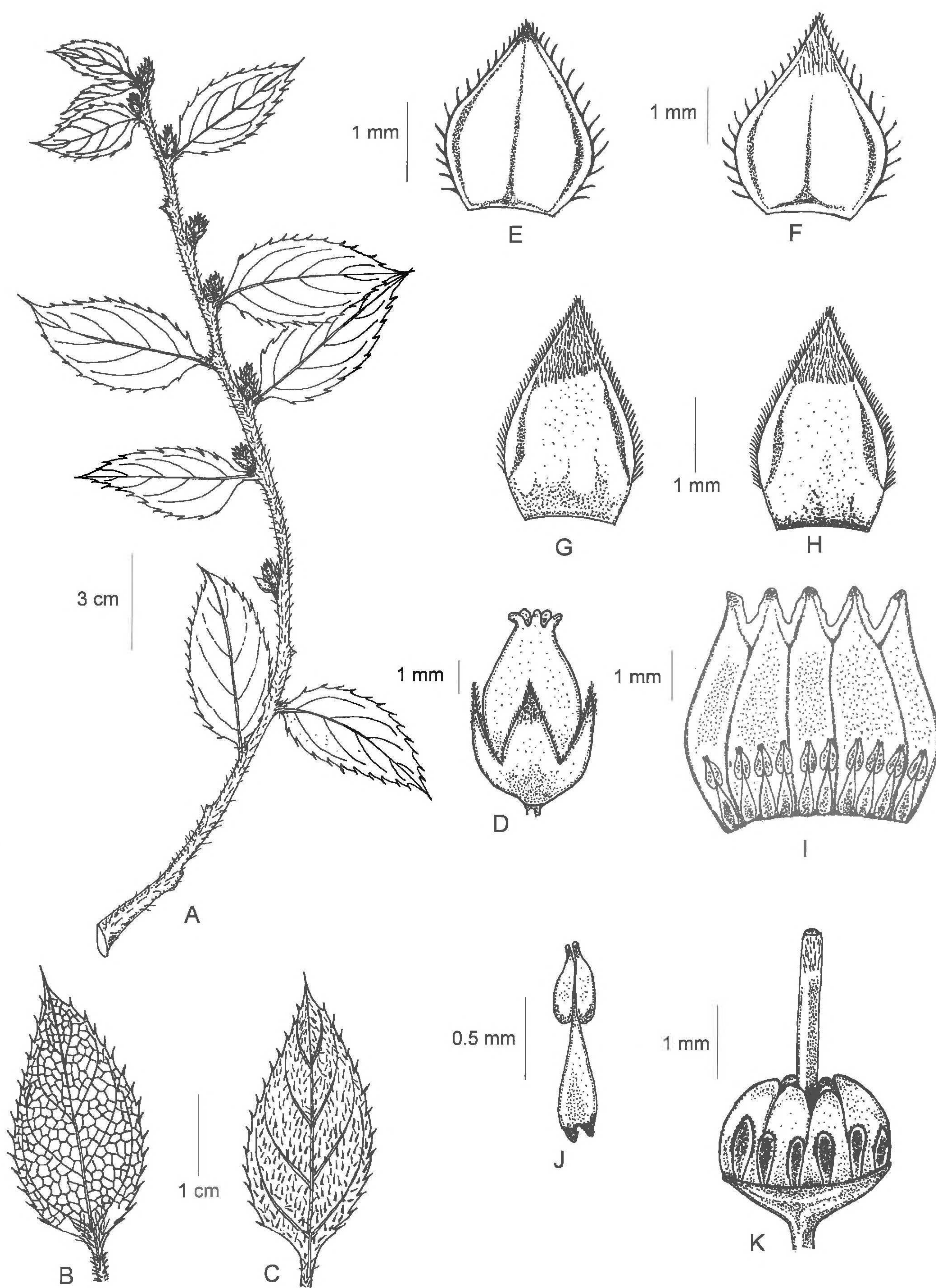


FIG. 1. *Diplycosia indica*. A. Habit. B. Leaf, upper surface. C. leaf, lower surface. D. Flower. E. Bract. F. Bracteole. G. Calyx, dorsal surface. H. Calyx, ventral surface. I. Corolla split open. J. Stamen. K. Pistil (Scale bars: A = 3 cm; B–C = 1 cm; D – I and K = 1 mm; J = 0.5 mm).

TABLE 1. Distinguishing characters of *Diplycosia indica* and *D. aperta*.

	<i>Diplycosia indica</i>	<i>Diplycosia aperta</i>
Habit	Terrestrial, prostrate shrubs	Epiphytic, sometimes scandent shrubs
Leaves	Margin with short cilia; lateral veins in 3–4 pairs, distinct beneath	Margin with long cilia; lateral veins in 2 pairs, obscure beneath
Flowers	(3–)4–6; pedicel 0.5 mm, glabrous	1 or 2, rarely 3; pedicel 0.8–1.1 cm, with bristles
Bracteoles	Acute to shortly acuminate, 3–3.5 mm long, very sparsely puberulous in the apical half along midrib on dorsal surface	Obtuse, ca. 1.5 mm long, glabrous throughout the dorsal surface
Calyx	Minutely puberulous on both surfaces in apical portion	Glabrous to some fine glandular warts on dorsal surface
Corolla	ca. 4 mm long, white, lobes 0.75 mm	8–9 mm long, red or rose, lobes 1.5 mm

rounded to broadly cuneate at base, margin serrulate-ciliate with short cilia, cilia 0.5–1 mm long, laxly softly pilose at the base along mid-vein, dark green above, setulose, light green beneath; veins impressed above, distinct beneath, lateral veins in 3–4 pairs; petiole 1.5–3 mm long, setulose, red. Inflorescence a fascicle, up to 7 mm long, (3–)4–6-flowered, glabrous; bracts 1.5–2 mm long × 1.8–2.2 mm wide, basal, ovate, acute, glabrous, margin membranous, ciliate, reddish-green; bracteoles 2, 3–3.5 mm long × 1.3–1.8 mm wide, ovate, acute to shortly acuminate, opposite, concave, margin membranous, ciliate, very sparsely puberulous in the apical half along the middle on dorsal surface. Flowers 4–5 mm long, urceolate; pedicel ca. 0.5 mm long, inconspicuous, glabrous. Sepals 5–6, 1.5–3 mm long × 1–1.5 mm wide, ovate-triangular, acuminate, minutely puberulous in the apical portion on both the surfaces, margin membranous, thickly puberulous, adnate to the ovary, rosy-pink. Corolla ca. 4 mm long, urceolate, white, 6-lobed; lobes ca. 0.7 mm long, ovate, apex obtuse to rounded, margin obscurely crenulate, glabrous. Stamens 10, ca. 1.5 mm long, loosely epipetalous, caducous, filament ca. 0.8 mm long, oblong, dilated at middle, papillose; anther with tubules 0.6 mm long, very small, 2-lobed, oblong. Pistil 2.5–3.5 mm long; ovary superior, 1 mm long × 1.5 mm wide, subglobose, subglabrous or scattered puberulous, light green; style ca. 2 mm long, slender, sparsely minutely hairy in upper half; disk cupular, 8–10 lobed, pressed against the ovary, papillose. Fruit not seen.

Diplycosia indica is closely allied to *Diplycosia aperta* J.J.Sm. but can be distinguished from it by its terrestrial habit; inflorescence with 4–6, glabrous pedicelled, much smaller, white flowers; acute to acuminate, sparsely puberulous bracteoles, and puberulous calyx.

Habitat and ecology.—Rare among scrubs on sub-alpine slopes, in association with *Viburnum erubescens*, *Thamnocalamus aristatus*, etc. and ferns at an altitude of about 3000 m.

Flowering.—June.

Distribution.—India: Eastern Himalaya (West Bengal). Endemic.

Etymology.—*Diplycosia indica* is named after India, the country of its origin.

Conservation status.—The new species could not be traced from anywhere inside the Singalila National Park except for a small population. Since Singalila National Park—especially from Manebhanjeng to Sandakphu—is a famous trekking route, it attracts a large number of tourists and trekkers throughout the year. The increasing pressure from the tourism industry and large scale cattle grazing in and around park areas, are posing severe threats to the natural habitat of numerous species including *Diplycosia indica*.

Additional specimen examined: **INDIA. West Bengal:** Darjeeling district, 32 km N of Manebhanjeng, from Kainyakata to Kalapokhri, ca. 2950 m, 02 Jun 2006, M.R. Debta 40813 (CAL, BSD).

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